I (WE) CLAIM:

1.   A method for detecting breathing cycle information with ultrasound, the method comprising:

      (a)   obtaining ultrasound data acquired over a period of time; and

      (b)   determining at least a first portion of a breathing cycle as a function of the ultrasound data.

2.   The method of Claim 1 wherein (a) comprises obtaining ultrasound data responsive to contrast agents.

3.   The method of Claim 1 wherein (b) comprises determining a motion parameter of a current frame of data relative to a reference frame of data.

4.   The method of Claim 4 wherein (b) comprises determining the motion parameter as a function of a plurality of local regions in the current frame of data relative to the reference frame of data.

5.   The method of Claim 1 wherein (b) comprises determining a cost function value as a function of time, the cost function value associated with motion between a plurality of frames of data.

6.   The method of Claim 1 further comprising:

      (c)   displaying a breathing cycle waveform comprising the first portion.

7.   The method of Claim 1 further comprising:

      (c)   identifying the first portion as a function of a trend in the breathing cycle.

8.   The method of Claim 7 wherein (c) comprises identifying one of a peak and minimum of the breathing cycle.

9.   The method of Claim 1 wherein (b) comprises determining the first portion as a function of a first reference frame of ultrasound data and a first subsequent frame of ultrasound data;

further comprising:

(c)   identifying reoccurrence of the first portion of the breathing cycle; and

(d)   repeating (b) with a second reference frame of ultrasound data associated with the reoccurrence of the first portion.

10.   The method of Claim 1 further comprising:

(c)   repeating (b) for each cycle of the breathing cycle with a different reference frame for each breathing cycle; and

wherein (b) comprises tracking motion for each breathing cycle as a function of the reference frame for each breathing cycle.

11.   The method of Claim 10 further comprising:

(d)   morphing frames of ultrasound data within each breathing cycle to the reference frame for the corresponding breathing cycle.

12.·   A system for detecting breathing cycle information with ultrasound, the system comprising:

a memory operable to store frames of ultrasound data acquired over a period of time; and

a processor operable to determine at least a first portion of a breathing cycle as a function of the ultrasound data.

13.   The system of Claim 12 wherein the processor is operable to determine a motion parameter of a plurality of frames of ultrasound data relative to a reference frame of data.

14.   The system of Claim 12 further comprising:

a display operable to display a breathing cycle waveform.

15.   The system of Claim 12 wherein the processor is operable to identify the first portion as a function of a trend in the breathing cycle.

16.   A method for detecting a cycle with ultrasound data, the method comprising:

(a)   tracking motion of a plurality of frames of ultrasound data with respect to a reference frame of ultrasound data;

(b)   calculating a cyclic parameter as a function of the tracked motion;

(c)   identifying a first portion of the cycle as a function of the cyclic parameter;

(d)   repeating (a), (b) and (c) for each of a plurality of subsequent cycles; and

(e)   resetting the reference frame of data for each of the plurality of subsequent cycles as a first frame of ultrasound data corresponding to the first portion of the cycle.

17.   The method of Claim 16 wherein (a) comprises tracking the motion as a function of a plurality of local regions.

18.   The method of Claim 16 wherein (b) comprises calculating a cost as a function of an amount of motion of each of the plurality of frames of ultrasound data relative to the reference frame of data.

19.   The method of Claim 16 further comprising:

(f)   morphing frames of data for each cycle relative to the reset reference frame for the corresponding cycle.

20. The method of Claim 16 wherein (c) comprises identifying the first portion in a breathing cycle.

21. The method of Claim 16 wherein (a) comprises tracking motion in B-mode frames of data.